Science Advisory Committee Meeting at Thorpewood.

Vegetation Communities Resources Workgroup

Notes from 3-7-02

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Resource Component	***Stressor***	***Sources***	***Ecological Effects***	***Severity of Threat*** *(High – Medium – Low - Unknown)*	***Indicator/Vital Sign***
	non-native insects	accidental & deliberate introduction	defoliation, mortality, changes in species composition, loss	medium	
oaks, pine, other trees	gypsy moth		of habitat	medium	
Hemlock	hemlock wooly adelgid			medium	
maple, elm	Asian longhorn beetle			low	
	non-native animals	accidental & deliberate introduction	trampling, grazing, changes in natural plant population sizes	low	
Marshes	nutria			low	
Meadows, forest	feral cats, dogs, rabbits			low	
all types, forests, wetlands, meadows, scrub / shrub	non-native plants	accidental & deliberate introduction, horticulture, land use disturbances, dumping, animals	displacement of native plants, changes in hydrology, changes in soil chemistry, wildlife habitat loss	HIGH	
Trees	plants diseases	accidental introduction	change in natural species composition, mortality of species, loss of habitat,	medium	
Flowering dogwood	dogwood anthracnose		change in viewshed	medium	
American elm, other	Dutch elm disease			medium	

elms?					
Butternut	butternut canker			medium	
American beech	beech bark disease			low	
American chestnut	chestnut blight			low	
Forest understory	White-tailed Deer	lack of predators	changes in natural species composition/cover, impedes successional changes	HIGH	
all vegetation communities, soil, water quality	external development (non-NPS, outside boundaries)	commercial, residential, utilities	wildlife habitat fragmentation, changes in hydrology, increase in non-native species, erosion	HIGH	
all vegetation communities, soil, water quality	internal development (NPS & others, inside park boundaries)	new facilities, concessions, politics, utilities, maintenance	wildlife habitat fragmentation, changes in hydrology, increase in non-native species, erosion, wetland drainage	HIGH	
all contiguous vegetation cover types	fragmentation	changes in land use inside & outside parks, park legislation	increased amount of edge, increased non-native plants, decrease in population size viability	medium/high	
all vegetation communities, especially rare or sensitive species	overuse & concentrated use, poaching, littering	visitors	soil compaction, trampling of plants, population decline of rare plants, increase in non-natives.	medium	
all vegetation communities	cultural resources	overlapping & conflicting legislation	fragmentation, habitat changes, introduction of chemicals, increase in exotics, change in	medium/high	

			natural species composition.		
potentially all vegetation types, especially successional areas	politics, greed, homocentricism, self promotion	congress, NPS hierarchy, survival instinct	loss of habitat, fragmentation	high	
riparian and aquatic vegetation	erosion a (stream bank) erosion b (stream channel) erosion c (land surface)	a-increased impervious surfaces within the watershed, flooding, boat wake (larger rivers), deforestation, agriculture, construction, recreation (vehicles, horseback riding, hikers) b--construction, deforestation c-- culverts	a--destruction of stream bank, incising/lowering of stream, addition of sediment b--uprootoing of aquatic vegetation, sediment addition in wetland areas downstream c--removal of substrate and vegetation	medium	
	climate				
all vegetation communities	catastrophic disturbance	hurricane, tornado, river flooding, ice storm, strong wind, landslides	soil saturation, biomass loss(limb breakage, defoliation, removal of above-ground portion), soil loss around roots, increase light (from canopy), decreased light (heavy layer of dead and down wood), canopy loss, understory loss, gap creation, increase seed distribution (exotic and otherwise), loss of	low to medium	

			seed bank, erosion, lossof species diversity, change in species composition, increase in non-native species, increase forage for wildlife, loss of wildlife habitat		
	air quality, ozone				
	mitigation				
Insect pollinated plant species, especially species specific to certain pollinators	loss of native pollinators	loss of habitat	decline in native species abundance	unknown	